

REMARKS

Claims 1-5 and 7-8 were examined and rejected. No claims have been amended, added or canceled. Applicant respectfully requests reconsideration of claims 1-5 and 7-8 in view of at least the following remarks.

I. Claims Rejected Under 35 U.S.C. § 102

Claims 1-2 and 7-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,413,962 issued to Lur et al. ("Lur"). It is axiomatic that to be anticipated, every limitation of a claim must be disclosed in a single reference.

Applicant respectfully disagrees with the rejection above for at least the reason Lur does not disclose an air gap between the second at least one interconnect and the third layer, as required by claim 1.

Lur discloses air dielectric 85 between envelope oxide layer 42 and passivation layer 80 (see Figure 11 and column 4 lines 23-34). However, air dielectric 85 is not between inter-level metal stud 29 and layer 80, because stud 29 is coated with oxide layer 42. In fact, Lur teaches that thin envelope oxide 42 surrounds all the electrode metal and inter-level metal studs 29 so that when inter-level dielectric layer 34 is etched using a solution with high etch selectivity for nitride (e.g., layer 34) to oxide (e.g., layer 42), a coating of thin envelope oxide (e.g., layer 42) is left protecting and covering the metal studs (e.g., studs 29) (see column 3 lines 57-68).

Consequently, the Patent Office has not identified and Applicant is unable to find any disclosure in Lur of the above noted limitation of claim 1. Hence, for at least this first reason, Applicant respectfully requests the Patent Office withdraw the rejection above.

Any dependent claims not mentioned above are submitted as not being anticipated or obvious for at least the same reasons given above in support of their base claims.

II. Claims Rejected Under 35 U.S.C. § 103(a)

Claims 3-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,413,962 issued to Lur et al. ("Lur") in view of U.S. Patent No. 6,696,758 issued to Dubin et al. ("Dubin"). To render a claim obvious, all elements of the claim must be taught or suggested by at least one properly combined reference.

Applicant respectfully disagrees with the rejection above for at least the reason Lur and Dubin do not disclose an air gap between the second at least one interconnect and the third layer, as required by claim 1.

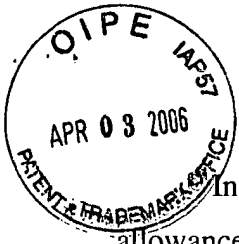
As noted above, Lur does not teach or suggest an air gap between an interconnect and a third layer.

Dubin teaches shunt material 380A substantially filling via 370, and barrier material 340 along sidewalls and base of trench 375 (see column 9 lines 12-16 and Figure 8). However, the Patent Office has not identified and Applicant is unable to find any teaching or suggestion of the above noted limitation of claim 1.

Hence, for at least the reason that neither Lur nor Dubin, nor the combination teach or suggest the above noted limitation of claim 1, Applicant respectfully requests the Patent Office withdraw the rejection above of claims 3-5 (e.g., as claims 3-5 depend from allowable base claim 1).

III. Patent Office's Response to Arguments

In response to the arguments section of the current Office Action, the Patent Office clarifies the interpretation of the word "shunt", by directing Applicant to Webster's College Dictionary, Tenth Edition, which states that a shunt is a conductor joining two points in an electrical circuit so as to form a parallel or alternative path through which a current may pass. Applicant does not agree that the definition provided by the Patent Office is either the only, or an appropriate, definition of the word "shunt" in accordance with Applicant's claims. However, this point is moot, as Applicant is asserting that the claims are allowable for at least reasons related to other limitations of Applicant's claims.



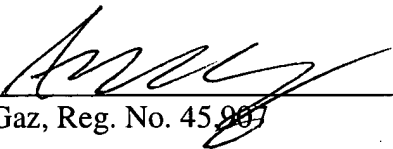
CONCLUSION

In view of the foregoing, it is believed that all claims now are now in condition for allowance and such action is earnestly solicited at the earliest possible date. If there are any additional fees due in connection with the filing of this response, please charge those fees to our Deposit Account No. 02-2666.

Respectfully submitted,

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Amber D. Saunders

3/29/06
Date